The author gives in tabular form an estimate of the population, coal output, export and consumption for the years 1899 to 1950, by which date the 15,000 million tons assumed to be now remaining will be exhausted. The prosperity assured by the coal of the country to navigation, manufactures and commerce will then gradually disappear, and the historian of a powerful empire will conclude, the author prophesies, his account of a remarkable period by the words: *Finis Britanniae!* Happily, however, the array of statistics, the copious particulars of the coal-seams, and the faithfully translated estimates of eminent experts do not altogether justify the author's Cassandra-like attitude.

The work has been compiled with great care, and the author deserves high praise for the accuracy with which the names of English places and persons have been presented. On p. 564 there is a curious slip. Speaking of the introduction of railways in 1844, the author says: "Mine, aubergiste *of the George*, pleurait la fin des diligences." The archaic expression "Mine host" has proved too severe a test for the author's undoubtedly extensive knowledge of the English language.

BENNETT H. BROUGH.

OUR BOOK SHELF.

Ueber den Bau und die Entwicklung der Linse. By Dr. Carl Rabl. Pp. 324; plates 14. (Leipzig, 1900.)

IN the "Notes" column brief mention has recently been made of the concluding portion of Dr. Rabl's important investigations on the structure and development of the crystalline lens of the eye, which appeared in the *Zeitscrhift fur wiss. Zoologie.* The author has now reproduced the entire monograph as a separate work, with the original coloured plates; and since it is a most elaborate treatise on a very difficult subject, its appearance in this form should be welcomed by all students of this branch of anatomy.

There are, perhaps, few phenomena in the developmental history of animals more astounding to the ordinary mind than the fact that a structure seated so comparatively deep as is the crystalline lens of the human eye should arise from the outer, or epiblastic, layer of the embryo, and attain its permanent position, first by invagination, and then by separation from its parent layer. Nevertheless, it is a fact about which there can be no possibility of dispute; and the more superficial position occupied by the spherical lens of fishes serves, in a measure, to indicate the manner in which the conditions obtaining in the mammalian eye have been gradually evolved.

By means of the beautiful series of plates illustrating Dr. Rabl's work the student is enabled to comprehend at a glance, firstly, the mode of development of the lens respectively characteristic of fishes, amphibians, reptiles, birds and mammals; and, secondly, the different histological peculiarities presented by the lens itself in the same groups. Within the limits of a notice in this column, it is out of the question to discuss any details of the work before us; but it may be mentioned that in the concluding section the author enters into the abstruse speculation as to what may have been the degree of development of the eye in *Archaeopteryx* and other extinct animals, and also as to the gradations which may have formerly existed between the present differentiated types of lens-structure. Very interesting, too, are his observations with regard to the lens in the aborted eye of the mole. Here the rudimentary condition of the lens does not commence in the course of development, or in the fully adult animal; but it is distinctly observable in the earliest stages, when it is relatively smaller and contains fewer cells than in other mammals. Hence we have evidence of the extreme antiquity of the mole's adaptation to its present state of existence—evidence fully supported by palæontological facts.

The work may be characterised as a masterpiece of patient and careful investigation in an abstruse and difficult line of research. R. L.

Building Construction for Beginners. By J. W. Riley. Pp. vi+255. (London: Macmillan and Co., Ltd., 1899.)

THIS is an addition to the increasing number of works on Elementary Building Construction, which all have for their ultimate goal the preparation of students for the May examinations of the Department of Science and Art.

Commencing with the inevitable introductory remarks on drawing instruments and scales, the student is taken through all the various building trades, and at the end of each are added questions in the form of examination papers which should test the student's knowledge as he advances.

As the author observes, isometric projection is a very valuable means of showing the beginner exactly what is intended, as it gives in one view the plan, elevation and section of the object portrayed. We are glad to see that an extensive use is made of such a form of illustration.

We may also congratulate our author on abstaining from confusing his illustrations by figuring with too many dimensions. Some authors refer with pride to their use of such a system but as Mr. Riley observes, it is very confusing, and tends by its complication to hinder the very object for which it is introduced.

In a new edition several small slips can be attended to, such, for instance, as the wall-plate surroundings in Fig. 384. The brickwork in this case should be taken up to the underside of the tiles. The "summary" at the end of each trade is an excellent innovation, and the book can be confidently recommended as the best of its class.

Catalogue of the Fossil Bryozoa in the Department of Geology, British Museum (Natural History). The Cretaceous Bryozoa. Vol. i. By Dr. J. W. Gregory. Pp. xiv + 457, and plates. (London: Printed by the order of the Trustees, 1899.)

WE may congratulate Dr. J. W. Gregory in having completed this volume before he left this country to take up the geological professorship at Melbourne. The value of this, and similar works, is inestimable to palæontologists in all parts of the world. The book itself is naturally a list of hard names; but it is something nowadays to know which is the correct name to apply to any particular fossil, and Dr. Gregory gives as far as possible the synonymy, diagnosis, dimensions and geological distribution of each species. A number of woodcuts in the text and seventeen excellent plates illustrate a great many of the species. We should have been glad of a table of the Cretaceous strata, to inform or remind us of the approximate British equivalents of such divisions as Rhodanian, Campanian, Hauterivian, &c., and also to indicate the sense in which the terms Neocomian and Cenomanian are used.

The volume deals with the various families which are included under the sub-orders Tubulata, Cancellata and Dactylethrata. All these are ranged under the order Cyclostomata, the sub-class Gymnolæmata, the class Ectoprocta and the group Bryozoa. It will be remembered that in the catalogue of recent marine forms in the British Museum, by Busk, that author employed the term Polyzoa instead of Bryozoa. The effort to secure a fixity in zoological nomenclature is one of the trials which beset the path of the worker. Dr. Gregory's carefully prepared catalogue will, we hope, have a permanent value in this respect.